

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
24 February 2005 (24.02.2005)

PCT

(10) International Publication Number
WO 2005/017329 A1

(51) International Patent Classification⁷: F02B 37/12,
F02M 25/07, F02B 29/04, F02M 35/02, F02B 37/16

(74) Agents: CARLIN, Gregory, J. et al.; Alston & Bird LLP,
Bank of America Plaza, 101 South Tryon Street, Suite
4000, Charlotte, NC 28280-4000 (US).

(21) International Application Number:
PCT/US2003/025029

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 8 August 2003 (08.08.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (*for all designated States except US*): HONEY-
WELL INTERNATIONAL INC. [US/US]; 101 Colum-
bia Road, Morristown, NJ 07962 (US).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

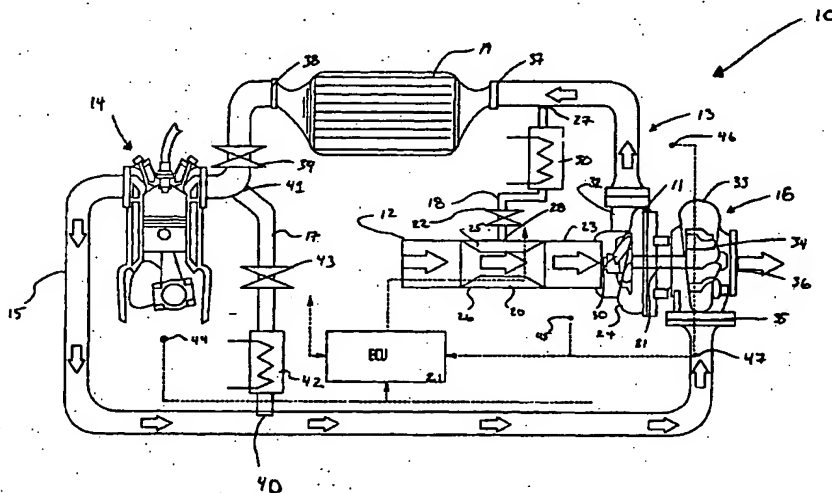
(75) Inventors/Applicants (*for US only*): GU, Ronglei
[CN/JP]; 1-16-1205, Nakachou, Urawa, Saitama 336-0007
(JP). FUJIKAWA, Yasuo [JP/JP]; 3-9-17 Takaban, Me-
guro-Ku, Tokyo 152-0004 (JP). WATANABE, Yoshikiyo
[JP/JP]; 68-5 Hikawa-Chou, Kounosu-City, Saitama-Ken
365-0045 (JP). ISHII, Atsushi [JP/JP]; 4-33-4-110
Fukuei, Ichikawa, Chiba 247-0137 (JP).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: SURGE CONTROL SYSTEM FOR A COMPRESSOR



(57) Abstract: A compressor active surge control system that includes an air recirculation line that has a first end connected down-
stream of a compressor outlet and a second end connected upstream of a compressor inlet. The gas recirculation line recirculates
compressed air from the compressor outlet to the compressor inlet. Also included in the system is a mixer positioned to receive both
ambient air and recirculated air. Mixing of the air homogenizes the air prior to its introduction into the compressor. An air cooler
may be included that cools the recirculated air prior to its introduction into the compressor. Cooling and mixing of the recirculated air
expands the operating range of the compressor by reducing the incidence of surge. Various existing components, such as intercoolers
and filters, may serve the additional duty of cooling or mixing the recirculated air.

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